Contents Index

VOLUME 70, NUMBER 1 JANUARY–FEBRUARY 1993

iii Instructions to Authors

vi Acknowledgment of Reviewers

1 Effects of Drying Temperature and Farina Blending on Spaghetti Quality Using Response Surface Methodology. *L. J. Malcolmson, R. R. Matsuo,* and *R. Balshaw*

8 Effect of Sorghum Flour Addition on the Characteristics of Wheat Flour Tortillas. *P. I. Torres, B. Ramírez-Wong, S. O. Serna-Saldivar,* and *L. W. Rooney*

14 Production and Nutritional Value of Weaning Foods from Mixtures of Pearl Millet and Cowpeas. *H. D. Almeida-Dominguez, S. O. Serna-Saldivar, M. H. Gomez,* and *L. W. Rooney*

18 Sensory and Physical Properties of Cakes with Bovine Plasma Products Substituted for Egg. *C. C. Lee, J. A. Love,* and *L. A. Johnson*

22 Direct Colorimetric Assay of Free Thiol Groups and Disulfide Bonds in Suspensions of Solubilized and Particulate Cereal Proteins. *K.-Y. Chan* and *B. P. Wasserman*

27 Rapid Solid-Phase Determination of Cereal Protein Using Bicinchoninic Acid. *K. Y. Chan* and *B. P. Wasserman*

29 Classification of Hard Red Wheat by Near-Infrared Diffuse Reflectance Spectroscopy. *S. R. Delwiche* and *K. H. Norris*

36 Air-Aspirated Cleaning to Separate Sound from Preharvest-Sprouted Wheat. *A. D. Bettge* and *Y. Pomeranz*

42 Waxy Corn Starch: Monoglyceride Interaction in a Model System. *J. J. Huang* and *P. J. White*

47 Collaborative Evaluation of an Enzymatic Starch Damage Assay Kit and Comparison with Other Methods. *T. S. Gibson, C. J. Kaldor,* and *B. V. McCleary*

51 Distribution of Polyphenol Oxidase in Flour Millstreams of Canadian Common Wheat Classes Milled to Three Extraction Rates. *D. W. Hatcher* and *J. E. Kruger*

55 Ferulic Acid in Rye and Wheat Grain and Grain Dietary Fiber. *K. Rybka, J. Sitarski,* and *K. Raczyńska-Bojanowska*

59 Flow Behavior of Wheat Flour-Water Dough Using a Capillary Rheometer. I. Effect of Capillary Geometry. *N. Sharma, M. A. Hanna,* and *Y. R. Chen*

63 Flow Behavior of Wheat Flour-Water Dough Using a Capillary Rheometer. II. Effects of Water, Protein, Mix, and Rest Time. *N. Sharma, M. A. Hanna,* and *D. B. Marx*

67 Viscoelastograph Measures and Total Organic Matter Test: Suitability in Evaluating Textural Characteristics of Cooked Pasta. *M. G. D'Egidio, B. M. Mariani, S. Nardi,* and *P. Novaro*

73 Extraction and Enrichment of (1→3),(1→4)-β-D-Glucan from Barley and Oat Brans. *R. S. Bhatty*

77 Influence of Gluten Components and Flour Lipids on Soft White Wheat Quality. *M. S. Kaldy, G. R. Kereliuk,* and *G. C. Kozub*

81 Fine Structure of Amylopectin in Relation to Gelatinization and Retrogradation Behavior of Maize Starches from Three *wx*-Containing Genotypes in Two Inbred Lines. *R. C. Yuan, D. B. Thompson,* and *C. D. Boyer*

90 Relationship of Flour Aleurone Fluorescence to Flour Refinement for Some Canadian Hard Common Wheat Classes. *S. J. Symons* and *J. E. Dexter*

95 Comparative Effects of Wheat Flour Protein, Lipid, and Pentosan Composition in Relation to Baking and Milling Quality. *R. Graybosch, C. J. Peterson, K. J. Moore, M. Stearns,* and *D. L. Grant*

101 Characterization of Poorly Digested Protein of Cooked Rice Protein Bodies. *A. P. Resurreccion, X. Li, T. W. Okita,* and *B. O. Juliano*

105 Zein Composition in Hard and Soft Endosperm of Maize. *M. A. Dombrink-Kurtzman* and *J. A. Bietz*

Contents Index

VOLUME 70, NUMBER 1 JANUARY–FEBRUARY 1993

iii Instructions to Authors

vi Acknowledgment of Reviewers

1 Effects of Drying Temperature and Farina Blending on Spaghetti Quality Using Response Surface Methodology. *L. J. Malcolmson, R. R. Matsuo,* and *R. Balshaw*

8 Effect of Sorghum Flour Addition on the Characteristics of Wheat Flour Tortillas. *P. I. Torres, B. Ramírez-Wong, S. O. Serna-Saldivar,* and *L. W. Rooney*

14 Production and Nutritional Value of Weaning Foods from Mixtures of Pearl Millet and Cowpeas. *H. D. Almeida-Dominguez, S. O. Serna-Saldivar, M. H. Gomez,* and *L. W. Rooney*

18 Sensory and Physical Properties of Cakes with Bovine Plasma Products Substituted for Egg. *C. C. Lee, J. A. Love,* and *L. A. Johnson*

22 Direct Colorimetric Assay of Free Thiol Groups and Disulfide Bonds in Suspensions of Solubilized and Particulate Cereal Proteins. *K.-Y. Chan* and *B. P. Wasserman*

27 Rapid Solid-Phase Determination of Cereal Protein Using Bicinchoninic Acid. *K. Y. Chan* and *B. P. Wasserman*

29 Classification of Hard Red Wheat by Near-Infrared Diffuse Reflectance Spectroscopy. *S. R. Delwiche* and *K. H. Norris*

36 Air-Aspirated Cleaning to Separate Sound from Preharvest-Sprouted Wheat. *A. D. Bettge* and *Y. Pomeranz*

42 Waxy Corn Starch: Monoglyceride Interaction in a Model System. *J. J. Huang* and *P. J. White*

47 Collaborative Evaluation of an Enzymatic Starch Damage Assay Kit and Comparison with Other Methods. *T. S. Gibson, C. J. Kaldor,* and *B. V. McCleary*

51 Distribution of Polyphenol Oxidase in Flour Millstreams of Canadian Common Wheat Classes Milled to Three Extraction Rates. *D. W. Hatcher* and *J. E. Kruger*

55 Ferulic Acid in Rye and Wheat Grain and Grain Dietary Fiber. *K. Rybka, J. Sitarski,* and *K. Raczyńska-Bojanowska*

59 Flow Behavior of Wheat Flour-Water Dough Using a Capillary Rheometer. I. Effect of Capillary Geometry. *N. Sharma, M. A. Hanna,* and *Y. R. Chen*

63 Flow Behavior of Wheat Flour-Water Dough Using a Capillary Rheometer. II. Effects of Water, Protein, Mix, and Rest Time. *N. Sharma, M. A. Hanna,* and *D. B. Marx*

67 Viscoelastograph Measures and Total Organic Matter Test: Suitability in Evaluating Textural Characteristics of Cooked Pasta. *M. G. D'Egidio, B. M. Mariani, S. Nardi,* and *P. Novaro*

73 Extraction and Enrichment of (1→3),(1→4)-β-D-Glucan from Barley and Oat Brans. *R. S. Bhatty*

77 Influence of Gluten Components and Flour Lipids on Soft White Wheat Quality. *M. S. Kaldy, G. R. Kereliuk,* and *G. C. Kozub*

81 Fine Structure of Amylopectin in Relation to Gelatinization and Retrogradation Behavior of Maize Starches from Three *wx*-Containing Genotypes in Two Inbred Lines. *R. C. Yuan, D. B. Thompson,* and *C. D. Boyer*

90 Relationship of Flour Aleurone Fluorescence to Flour Refinement for Some Canadian Hard Common Wheat Classes. *S. J. Symons* and *J. E. Dexter*

95 Comparative Effects of Wheat Flour Protein, Lipid, and Pentosan Composition in Relation to Baking and Milling Quality. *R. Graybosch, C. J. Peterson, K. J. Moore, M. Stearns,* and *D. L. Grant*

101 Characterization of Poorly Digested Protein of Cooked Rice Protein Bodies. *A. P. Resurreccion, X. Li, T. W. Okita,* and *B. O. Juliano*

105 Zein Composition in Hard and Soft Endosperm of Maize. *M. A. Dombrink-Kurtzman* and *J. A. Bietz*

109 NOTE: Freezing Experiments on Yeasted Dough Slabs. Effects of Cryogenic Temperatures on the Baking Performance. *O. Neyreneuf* and *B. Delpuech*

111 NOTE: Trypsin Inhibitor Measurement: Effect of Order of Reagent Addition. *C. E. Stauffer*

113 NOTE: Thioredoxin and Bread Wheat. *J. H. Wong, K. Kobrehel, C. Nimbona, B. C. Yee, A. Balogh, F. Kiss,* and *B. B. Buchanan*

VOLUME 70, NUMBER 2 MARCH–APRIL 1993

115 Water-Soluble Zein by Enzymatic Modification in Organic Solvents. *A. Mannheim* and *M. Cheryan*

122 Cooked Pasta Texture: Comparison of Dynamic Viscoelastic Properties to Instrumental Assessment of Firmness. *N. M. Edwards, M. S. Izydorczyk, J. E. Dexter,* and *C. G. Biliaderis*

127 Induction and Secretion of α-Amylase, (1→3),(1→4)-β-Glucanase, and (1→3)-β-Glucanase Activities in Gibberellic Acid and $CaCl_2$-Treated Half Seeds and Aleurones of Wheat. *A.-M. Bernier* and *G. M. Ballance*

133 Water Absorption by Cracked Mustard. *X. Zhang* and *G. H. Brusewitz*

137 Preparation and Pasting Properties of Wheat and Corn Starch Phosphates. *S. Lim* and *P. A. Seib*

145 Location of Phosphate Esters in a Wheat Starch Phosphate by ^{31}P-Nuclear Magnetic Resonance Spectroscopy. *S. Lim* and *P. A. Seib*

152 Assessment of Extrusion-Induced Starch Fragmentation by Gel-Permeation Chromatography and Methylation Analysis. *P. Rodis, L.-F. Wen,* and *B. P. Wasserman*

157 Genotype and Environment Effects on Tocols of Barley and Oats. *D. M. Peterson* and *A. A. Qureshi*

163 Enzyme-Resistant Starch: Studies Using Differential Scanning Calorimetry. *L. Gruchala* and *Y. Pomeranz*

171 Characterization of Starch Structures of 17 Maize Endosperm Mutant Genotypes with Oh43 Inbred Line Background. *Y.-J. Wang, P. White, L. Pollak,* and *J. Jane*

179 Changes in Sorghum Starch During Parboiling. *R. Young, M. H. Gomez, C. M. McDonough, R. D. Waniska,* and *L. W. Rooney*

183 Milling and Cookie Baking Quality of Near-Isogenic Lines of Wheat Differing in Kernel Hardness. *D. E. Rogers, R. C. Hoseney, G. L. Lookhart, S. P. Curran, W. D. A. Lin,* and *R. G. Sears*

188 Heating A-, B-, and C-Type Starches in Aqueous Sodium Chloride: Effects of Sodium Chloride Concentration and Moisture Content on Differential Scanning Calorimetry Thermograms. *C. Y. Lii* and *B. L. Lee*

193 Induced Hard-to-Cook State in Cowpeas by Freeze-Thawing and Calcium Chloride Soaking. *K. Liu, R. D. Phillips,* and *K. H. McWatters*

196 Differential Scanning Calorimetry Studies on Rye Flour-Milling Streams. *L. Wannerberger* and *A.-C. Eliasson*

199 Physicochemical Properties of Starches from Mutant Genotypes of the Oh43 Inbred Line. *Y.-J. Wang, P. White,* and *L. Pollak*

204 Low Molecular Weight Organic Composition of Ethanol Stillage from Corn. *M. K. Dowd, P. J. Reilly,* and *W. S. Trahanovsky*

209 Purification and Characterization of Two Arabinoxylans from Wheat Bran. *K. Shiiba, H. Yamada, H. Hara, K. Okada,* and *S. Nagao*

214 Extrusion Cooking of Pearl Millet for Production of Millet-Cowpea Weaning Foods. *H. D. Almeida-Dominguez, M. H. Gomez, S. O. Serna-Saldivar, R. D. Waniska, L. W. Rooney,* and *E. W. Lusas*

219 Baker's Yeast Sampling and Frozen Dough Stability. *P. Gélinas, M. Lagimonière,* and *C. Dubord*

226 Determining the Degree of Gelatinization in Parboiled Rice: Comparison of a Subjective and an Objective Method. *W. E. Marshall, J. I. Wadsworth, L. R. Verma,* and *L. Velupillai*

231 Mixed Linkage β-Glucan, Protein Content, and Kernel Weight in *Avena* Species. *S. S. Miller, P. J. Wood, L. N. Pietrzak,* and *R. G. Fulcher*

234 NOTE: A Sensitive Kinetic Microassay for the Determination of Wheat α-Amylase. *J. E. Kruger* and *D. W. Hatcher*

236 NOTE: Correlation Between Chopin and AACC Methods of Determining Damaged Starch. *G. S. Ranhotra, J. A. Gelroth,* and *G. J. Eisenbraun*

238 NOTE: Size-Distribution of Starch Granules Isolated from Hard Red Winter and Soft Red Winter Wheats. *D. B. Bechtel, I. Zayas, R. Dempster,* and *J. D. Wilson*

VOLUME 70, NUMBER 3 MAY–JUNE 1993

241 A Simple Antibody-Based Test for Dough Strength. III. Further Simplification and Collaborative Evaluation for Wheat Quality Screening. *J. L. Andrews, M. J. Blundell,* and *J. H. Skerritt*

247 Dynamic Measurement of Starch Granule Swelling During Gelatinization. *G. R. Ziegler, D. B. Thompson,* and *J. Casasnovas*

252 Effects of Hydrocolloids on Processing and Qualities of Wheat Tortillas. *C. P. Friend, R. D. Waniska,* and *L. W. Rooney*

257 Wet Milling of Maize Grits. *S. R. Eckhoff, W. V. Jayasena,* and *C. K. Spillman*

260 Chemical and Molecular Properties of Irradiated Starch Extrudates. *A. S. Sokhey* and *R. Chinnaswamy*

269 Testing for Sprout Damage in Malting Barley Using the Rapid Visco-Analyser. *M. L. Bason, J. A. Ronalds, C. W. Wrigley,* and *L. J. Hubbard*

272 Effects of Cooking Water Composition on Stickiness and Cooking Loss of Spaghetti. *L. J. Malcolmson,* and *R. R. Matsuo*

275 Starch, Energy, and Protein Utilization by Rats in Milled Rice of IR36-Based Amylose Extender Mutant. *B. O. Eggum, B. O. Juliano, C. M. Perez,* and *G. S. Khush*

280 Genetic Improvement in Milling and Baking Quality of Hard Red Spring Wheat Cultivars. *E. Souza, J. M. Tyler, K. D. Kephart,* and *M. Kruk*

286 Development of Two Instrumental Methods for Corn Masa Texture Evaluation. *B. Ramirez-Wong, V. E. Sweat, P. I. Torres,* and *L. W. Rooney*

291 Effects of Some Baking Ingredients on Physical and Structural Properties of Wheat Flour Extrudates *G. H. Ryu, P. E. Neumann,* and *C. E. Walker*

298 Grain, Flour, and Dough Characteristics of Selected Strains of Diploid Wheat, *Triticum monococcum* L. *M. G. D'Egidio, S. Nardi,* and *V. Vallega*

303 Composition and Protein Nutritional Quality of Quinoa. *G. S. Ranhotra, J. A. Gelroth, B. K. Glaser, K. J. Lorenz,* and *D. L. Johnson*

306 Physicochemical and Functional Properties of Rye Nonstarch Polysaccharides. IV. The Effect of High Molecular Weight Water-Soluble Pentosans on Wheat-Bread Quality in a Straight-Dough Procedure. *S. Vanhamel, G. Cleemput, J. A. Delcour, M. Nys,* and *P. L. Darius*

311 Physicochemical and Functional Properties of Rye Nonstarch Polysaccharides. V. Variability in the Structure of Water-Soluble Arabinoxylans. *C. J. A. Vinkx, H. R. Reynaert, P. J. Grobet,* and *J. A. Delcour*

318 Bread Volume Potential of Variable-Quality Flours with Constant Protein Level As Determined by Factors Governing Mixing Time and Baking Absorption Levels. *S. P. Roels, G. Cleemput, X. Vandewalle, M. Nys,* and *J. A. Delcour*

324 Heterogeneity in the Structure of Water-Soluble Arabinoxylans in European Wheat Flours of Variable Bread-Making Quality. *G. Cleemput, S. P. Roels, M. Van Oort, P. J. Grobet,* and *J. A. Delcour*

329 Carbohydrate Digestibility of Laboratory-Extruded Cereal Grains. *K. M. Dahlin* and *K. J. Lorenz*

333 Thermal Behavior of Potato Amylose and Enzyme-Resistant Starch from Maize. *D. Sievert* and *P. Würsch*

339 Enzyme-Resistant Starch. I. Quantitative and Qualitative Influence of Incubation Time and Temperature of Autoclaved Starch on Resistant Starch Formation. *R. C. Eerlingen, M. Crombez,* and *J. A. Delcour*

345 Enzyme-Resistant Starch. II. Influence of Amylose Chain Length on Resistant Starch Formation. *R. C. Eerlingen, M. Deceuninck,* and *J. A. Delcour*

351 Effects of Proof Temperature on the Quality of Pan Bread. *K. Siffring* and *B. L. Bruinsma*

354 Effect of Spring and Winter Growth Habitat on Compositional, Milling, and Baking Characteristics of Winter Wheats. *A. Monsalve-Gonzalez* and *Y. Pomeranz*

360 NOTE: Wet-Milling Characteristics of High-Temperature, High-Humidity Maize. *A. H. Mistry, X. Wu, S. R. Eckhoff,* and *J. B. Litchfield*

362 NOTE: Effect of Wheat Flour Aging on Starch-Granule Surface Proteins. *M. Seguchi*

364 NOTE: Lipidemic Responses in Rats Fed Flaxseed Oil and Meal. *G. S. Ranhotra, J. A. Gelroth, B. K. Glaser,* and *P. S. Potnis*

VOLUME 70, NUMBER 4 JULY-AUGUST 1993

367 Apparent Restriction of Starch Swelling in Cooked Noodles by Lipids in Some Commercial Wheat Flours. *W. S. Kim* and *P. A. Seib*

373 Effects of Emulsifiers and Hydrocolloids on Whole Wheat Bread Quality: A Response Surface Methodology Study. *E. Mettler* and *W. Seibel*

377 Effect of Disulfide Bond-Containing Protein on Rice Starch Gelatinization and Pasting. *B. R. Hamaker* and *V. K. Griffin*

381 Comparison of Aroma Compound (2-Acetyl-1-Pyrroline) in Leaves from Pandan (*Pandanus amaryllifolius*) and Thai Fragrant Rice (Khao Dawk Mali-105). *V. Laksanalamai* and *S. Ilangantileke*

385 Swelling and Gelatinization of Cereal Starches. IV. Some Effects of Lipid-Complexed Amylose and Free Amylose in Waxy and Normal Barley Starches. *W. R. Morrison, R. F. Tester, C. E. Snape, R. Law,* and *M. J. Gidley*

392 Effect of Flour Quality Characteristics on Puff Pastry Baking Performance. *R. L. Hay*

397 Physicochemical Properties of Roller-Milled Barley Bran and Flour. *R. S. Bhatty*

402 Wet Milling of Soft-Endosperm, High-Lysine Corn Using Short Steep Times. *E. J. Fox* and *S. R. Eckhoff*

405 Detection of Bread Wheat Farina Adulterant in Durum Wheat Semolina and Pasta Dried at Low, High, and Ultra-High Temperatures. *M. Sarwar* and *C. E. McDonald*

412 Effects of Added Proteins in Wheat Tortillas. *E. L. Suhendro, R. D. Waniska,* and *L. W. Rooney*

417 Textural Optimization of Spaghetti Using Response Surface Methodology: Effects of Drying Temperature and Durum Protein Level. *L. J. Malcolmson, R. R. Matsuo,* and *R. Balshaw*

423 Extraction of Soluble Dietary Fibers from Defatted Rice Bran. *S. Aoe, T. Oda, K. Tatsumi, M. Yamauchi,* and *Y. Ayano*

426 Modification of Physical and Barrier Properties of Edible Wheat Gluten-Based Films. *A. Gennadios, C. L. Weller,* and *R. F. Testin*

430 Statistical Analyses of Gliadin Reversed-Phase High-Performance Liquid Chromatography Patterns of Hard Red Spring and Hard Red Winter Wheat Cultivars Grown in a Common Environment: Classification Indices. *G. L. Lookhart, T. S. Cox,* and *and O. K. Chung*

435 Cholesterol-Lowering Effects in Hamsters of β-Glucan-Enriched Barley Fraction, Dehulled Whole Barley, Rice Bran, and Oat Bran and Their Combinations. *T. S. Kahlon, F. I. Chow, B. E. Knuckles,* and *M. M. Chiu*

440 Effects of Malting Conditions on Quality Characteristics of Malt and Roasted Malt Extract. *K. O. Kim M. K. Kim, Y. Y. Kang,* and *Y. C. Lee*

443 Enzyme Treatment of Popcorn Ears to Facilitate Shelling. *P. J. Wu, A. Song,* and *S. R. Eckhoff*

448 Partially Purified Proteolytic Enzymes from Wheat Flour and Their Effect on Elongational Viscosity of Cracker Sponges. *W. D. A. Lin, G. Lookhart,* and *R. C. Hoseney*

452 Quantitation of α-, β-, and γ-Kafirins in Vitreous and Opaque Endosperm of *Sorghum bicolor. J. J. Watterson, J. M. Shull,* and *A. W. Kirleis*

458 Detection of Wheat-Rye Chromosomal Translocations Using an Antisecalin Monoclonal Antibody. *R. Graybosch, Y. W. Seo,* and *C. J. Peterson*

463 Structure of Tapioca Pearls Compared to Starch Noodles from Mung Beans. *A. Xu* and *P. A. Seib*

471 Thermal Behavior of Annealed Acetic Acid-Soluble Wheat Gluten. *J. W. Lawton* and *Y. V. Wu*

475 Polymeric Glutenin of Wheat Lines with Varying Number of High Molecular Weight Glutenin Subunits. *L. Gao* and *W. Bushuk*

481 NOTE: Influence of Wheat-Drying Temperatures on the Birefringence and X-Ray Diffraction Patterns of Wet-Harvested Wheat Starch. *H. Köksel, F. Şahbaz,* and *Ö. Özboy*

483 NOTE: Relationship of D-Zone Omega Gliadins to the Proteins Associated with Differences in Quality of Durum Wheats. *A. Hussain* and *O. M. Lukow*

486 NOTE: Rheological Properties and Baking Quality of Flour from a Landrace and Durum Wheat Cultivars Grown in Jordan. *K. I. Ereifej* and *R. Shibli*

489 NOTE: Magnesium Bisulfite and Sodium Bisulfite as Alternative Steeping Agents for Wet Milling. *K. D. Rausch, S. K. Singh,* and *S. R. Eckhoff*

490 Recently Accepted Manuscripts

VOLUME 70, NUMBER 5 SEPTEMBER–OCTOBER 1993

493 Twin-Screw Extrusion of Rice Flour with Salt and Sugar. *F. Hsieh, K. M. Grenus, L. Hu,* and *H. E. Huff*

499 Enrichment of Tocopherols, Tocotrienols, and Oil in Barley Fractions by Milling and Pearling. *L. Wang, Q. Xue, R. K. Newman,* and *C. W. Newman*

502 Phytate Content of Some Popular Kuwaiti Foods. *Mostafa S. Mameesh* and *Mamta Tomar*

504 Effects of Phytic Acid on Protein Digestibility (In Vitro) and HCl-Extractability of Minerals in Pearl Millet Sprouts. *A. Kumar* and *B. M. Chauhan*

506 Improved Chromatographic Separation and Characterization of Ethanol-Soluble Wheat Proteins. *F. R. Huebner* and *J. A. Bietz*

512 Thermophysical Properties of Milled Rice Starch as Influenced by Variety and Parboiling Method. *C. G. Biliaderis, J. R. Tonogai, C. M. Perez,* and *B. O. Juliano*

517 Measurement and Interpretation of Dough Densities. *G. M. Campbell, C. D. Rielly, P. J. Fryer,* and *P. A. Sadd*

521 Amylopectin and Intermediate Materials in Starches from Mutant Genotypes of the Oh43 Inbred Line. *Y.-J. Wang, P. White, L. Pollak,* and *J. Jane*

526 Wheat Starch, Cassava Starch, and Cassava Flour Impairment of the Breadmaking Potential of Wheat Flour. *I. DeFloor, M. Nys,* and *J. A. Delcour*

530 Effect of Pectin-Wheat Bran Blends on Rat Blood Lipid and Fecal Responses and on Muffin Quality. *G. S. Ranhotra. J. A. Gelroth,* and *B. K. Glaser*

534 Reaction Patterns of Maize α-Amylases with Soluble Starch, Granular Starch, and Maltooligosaccharides. *C. A. Knutson*

539 Enzymatic Analysis of β-Glucan Content in Different Oat Genotypes. *K. Cho* and *P. J. White*

543 Determination of Molecular Size Distribution of Starch and Debranched Starch by a Single Procedure Using High-Performance Size-Exclusion Chromatography. *A. G. W. Bradbury* and *A. B. Bello*

548 Glass Transitions of Extrudates: Relationship with Processing-Induced Fragmentation and End-Product Attributes. *G. Kaletunc* and *K. J. Breslauer*

553 Changes in the Levels of Glutathione and Cysteine During the Mixing of Doughs with L-*threo*- and D-*erythro*-Ascorbic Acid. *R. Sarwin, G. Laskawy,* and *W. Grosch*

558 Stability and Nutrient Contribution of β-Carotene Added to Selected Bakery Products. *D. E. Rogers, R. B. Malouf, J. Langemeier, J. A. Gelroth,* and *G. S. Ranhotra*

562 Utilizing Ethanol Containing an Antioxidant or Chelator to Produce Stable Brown Rice Products. *E. T. Champagne* and *R. J. Hron, Sr.*

567 Amylopectin-Staling of Cooked Nonwaxy Milled Rices and Starch Gels. *C. M. Perez, C. P. Villareal, B. O. Juliano,* and *C. G. Biliaderis*

572 Nutritive Value of Chicken and Corn Flour Mixtures in Formulas for Infants with Lactose Intolerance. *L. Cornejo, M. Hernández,* and *A. Sotelo*

575 Extract Viscosity as an Indirect Assay for Water-Soluble Pentosan Content in Rye. *D. Boros, R. R. Marquardt, B. A. Slominski,* and *W. Guenter*

581 D-Glutenin Subunits: N-Terminal Sequences and Evidence for the Presence of Cysteine. *S. Masci, D. LeFiandra, E. Porceddu, E. J.-L. Lew, H. P. Tao,* and *D. D. Kasarda*

585 The Role of Xanthan Gum in White Layer Cakes. *R. A. Miller* and *R. C. Hoseney*

589 Purification and Characterization of Lipoxygenase Isoenzymes in Germinaing Barley. *G. Yang, P. B. Schwarz,* and *B. A. Vick*

596 Some Characteristics of Hydroxypropylated and Cross-Linked Rice Starch. *A.-I Yeh* and *S.-L. Yeh*

602 Evidence for Glycosylation of the High Molecular Weight Glutenin Subunits 2, 7, 8, and 12 from Chinese Spring and TAM 105 Wheats. *K. A. Tilley, G. L. Lookhart, R. C. Hoseney,* and *T. P. Mawhinney*

607 Variation of Seed Storage Proteins Within Hard Red Spring Wheat Cultivars and Effect on End-Use Properties. *M. E. McLendon, S. P. Lanning, C. F. McGuire, J. M. Martin,* and *L. E. Talbert*

611 NOTE: Interior Channels of Starch Granules. *J. E. Fannon, J. M. Shull,* and *J. N. BeMiller*

613 NOTE: Critical Moisture Content for Fissures in Rough Rice. *B. O. Juliano* and *C. M. Perez*

616 NOTE: Impact of Milling Procedure on Breadmaking Potential of Cassava Flour in Wheatless Breads. *I. DeFloor* and *J. A. Delcour*

618 Recently Accepted Manuscripts

VOLUME 70, NUMBER 6 NOVEMBER-DECEMBER 1993

619 Comparison of Physical, Chemical, and Functional Properties of *Moringa peregrina* (Al-Yassar or Al-Ban) and Soybean Proteins. *H. A. Al-Kahtani* and *A. A. Abou-Arab*

626 Modification of Some Physicochemical Properties of Wheat Flour Pentosans by an Enzyme Complex Recommended for Baking. *X. Rouau* and *D. Moreau*

633 Mixograph Studies. VI. Combined Effects of Charge (pH), Activated Double-Bond Compounds, and Oxidants on Dough Mixing Properties. *C. Kerr, R. C. Hoseney,* and *J. M. Faubion*

637 Avenanthramides—A Group of Phenolic Antioxidants in Oats. *L. Häll Dimberg, O. Theander,* and *H. Lingnert*

641 Structural Heterogeneity of Wheat Endosperm Arabinoxylans. *M. S. Izydorczyk* and *C. G. Biliaderis*

647 Effects of Flour Type and Dough Retardation Time on the Sensory Characteristics of Pizza Crust. *D. M. Larsen, C. S. Setser,* and *J. M. Faubion*

650 Screening for Stable High Head Rice Yields in Rough Rice. *B. O. Juliano, C. M. Perez,* and *F. Cuevas-Perez*

656 Effects of Storage History and Hybrid on Carbon Dioxide Production by Rewetted Shelled Corn. *B. P. Marks, R. L. Stroshine,* and *L. D. Dunkle*

662 Effect of Wheat Moisture Content on Hardness Scores Determined by Near-Infrared Reflectance and on Hardness Score Standardization. *W. R. Windham, C. S. Gaines,* and *R. G. Leffler*

667 Differences in Kafirin Composition During Endosperm Development and Germination in Sorghum Cultivars of Varying Hardness. *H. Mazhar* and *A. Chandrashekar*

671 Effect of High Pressure on the Crystalline Structure of Various Starch Granules. *Y. Hibi, T. Matsumoto,* and *S. Hagiwara*

676 Effects of Drying Temperature, Starch Damage, Sprouting, and Additives on Spaghetti Quality Characteristics. *L. A. Grant, J. W. Dick,* and *D. R. Shelton*

685 Quantitative Estimation of Corn Endosperm Vitreosity by Video Image Analysis. *F. C. Felker* and *J. W. Paulis*

689 Albumin Fraction from Spring, Winter, and Soft Wheats—Protein and Associated Carbohydrate Identified by Gel Filtration Chromatography and Gel Electrophoresis. *J. D. C. Figueroa* and *K. Khan*

696 Machine Recognition of Weevil Damage in Wheat Radiographs. *P. M. Keagy* and *T. F. Schatzki*

701 Protein Concentrates and Prime Starch from Wheat Flours. *Z. Czuchajowska* and *Y. Pomeranz*

707 Effects of Twin-Screw Extrusion on the Physical Properties of Dietary Fiber and Other Components of Whole Wheat and Wheat Bran and on the Baking Quality of the Wheat Bran. *W.-M. Wang, C. F. Klopfenstein,* and *J. G. Ponte, Jr.*

712 Effect of Twin-Screw Extrusion on the Nutritional Quality of Wheat, Barley, and Oats. *W.-M. Wang,* and *C. F. Klopfenstein*

716 Combined Effect of Protein Content and High-Temperature Drying Systems on Pasta Cooking Quality. *P. Novaro, M. G. D'Egidio, B. M. Mariani,* and *S. Nardi*

720 Prediction of Wet-Milling Starch Yield from Corn by Near-Infrared Spectroscopy. *R. L. Wehling, D. S. Jackson, D. G. Hooper,* and *A. R. Ghaedian*

723 A Laboratory Wet-Milling Procedure to Increase Reproducibility and Accuracy of Product Yields. *S. R. Eckhoff, K. D. Rausch, E. J. Fox, C. C. Tso, X. Wu, Z. Pan,* and *P. Buriak*

727 Milling Characteristics of Various Rough Rice Kernel Thickness Fractions. *H. Sun* and *T. J. Siebenmorgen*

734 Effects of McGill No. 2 Miller Settings on Surface Fat Concentation of Head Rice. *K. E. Bennett, T. J. Siebenmorgen,* and *A. Mauromoustakos*

739 Effects of Flour-to-Water Ratio and Time of Testing on Sorghum Porridge Firmness as Determined by a Uniaxial Compression Test. *A. A. Mohamed, B. R. Hamaker,* and *A. Aboubacar*

744 The Dahlquist Criterion: Applicability of a Rheological Criterion to the Loss of Pressure-Sensitive Tack in Flour-Water Dough. *S. S. Heddleson, D. D. Hamann,* and *D. R. Lineback*

748 Analysis of the Grain-Protectant Pesticides Chlorpyrifos-Methyl and Methoprene with a 15-Min Immunoassay for Field or Elevator Use. *S. L. Edward, A. S. Hill, P. Ashworth, J. Matt,* and *J. H. Skerritt*

753 Varietal Differences in Amylopectin Staling of Cooked Waxy Milled Rices. *C. P. Villareal, B. O. Juliano,* and *S. Hizukuri*

758 Recently Accepted Manuscripts.

759 NOTE: Isolation and Composition of a Natural Dye from the Stems of *Sorghum bicolor* (L.) Moench subsp. *americanum caudatum. J.-P. Rey, J.-L. Pousset, J. Levesque,* and *P. Wanty*

760 NOTE: Physical, Chemical, and Baking Properties of Wheat Dried with Microwave Energy. *L. E. Campaña, M. E. Sempé,* and *R. R. Filgueira*

762 NOTE: A Method to Evaluate the Lime-Cooking Properties of Corn (*Zea mays*). *S. O. Serna-Saldivar, M. H. Gomez, H. D. Almeida-Dominguez, A. Islas-Rubio,* and *L. W. Rooney*